1. A capacitor comprising an essentially monolithic structure of a ceramic dielectric and at least a first conductive block having at least a composite portion consisting essentially of glass and a conductive metal in an amount sufficient to render the composite portion conductive, wherein the composite portion is adjacent the ceramic dielectric and the glass of the composite portion is co-sintered to the ceramic dielectric such that there is a bond region but essentially no boundary between the composite portion and the ceramic dielectric, and wherein the first conductive block serves as a first electrode for the capacitor and is directly mountable on a first metallic surface trace on a printed circuit board.

2. The capacitor of claim 1 wherein the conductive metal comprises about 60-98% of the composite portion and the glass comprises about 2-40% of the composite portion.

3. The capacitor of claim 1 wherein the conductive metal comprises about 88-98% of the composite portion and the glass comprises about 2-12% of the composite portion.

4. The capacitor of claim 1 further comprising an internal metal electrode within the ceramic dielectric and at least one conductive metal-filled via extending from the internal metal electrode to the composite portion.

5. The capacitor of claim 1 wherein the first conductive block consists entirely of the composite portion.

6. The capacitor of claim 5 wherein the glass is distributed homogeneously throughout a matrix of the conductive metal.

7. The capacitor of claim 5 wherein the glass is concentrated in the first conductive block adjacent the ceramic dielectric.

8. The capacitor of claim 1 wherein the first conductive block includes a metal portion adjacent the composite portion and opposite the ceramic dielectric.

9. The capacitor of claim 1 further comprising a second conductive block having at least a composite portion adjacent and sintered to the ceramic dielectric opposite the first conductive block, wherein the second conductive block serves as a second electrode for the capacitor and is directly mountable on a second metallic surface trace on a printed circuit board.

10. The capacitor of claim 9 wherein the first and second conductive blocks each consist entirely of the composite portions.

11. The capacitor of claim 10 wherein the glass is distributed in the first and second conductive blocks homogeneously throughout a matrix of the conductive metal.

12. The capacitor of claim 10 wherein the glass is concentrated in the first and second conductive blocks adjacent the ceramic dielectric.

13. The capacitor of claim 9 wherein the first and second conductive blocks each include a metal portion adjacent the composite portion and opposite the ceramic dielectric.

14. The capacitor of claim 1 wherein the ceramic dielectric is horizontally disposed with the composite portion of the first conductive block sintered to a bottom portion thereof, and the capacitor further comprising a metallization on a top portion of the ceramic dielectric, the metallization adapted to be wire bonded to a second metallic surface trace on a printed circuit board.

15. The capacitor of claim 1 wherein the ceramic dielectric is horizontally disposed with the composite portion of the first conductive block sintered to a bottom portion thereof, and the capacitor further comprising a second conductive block having at least a composite portion adjacent and sintered to the ceramic dielectric opposite the first conductive block, wherein the second conductive block serves as a second electrode for the capacitor and is adapted to be wire bonded to a second metallic surface trace on a printed circuit board.

16. The capacitor of claim 1 wherein the ceramic dielectric is free of internal metal electrodes.

17. The capacitor of claim 1 wherein the first conductive block and the ceramic dielectric each have a thickness in a direction perpendicular from the bond region, and the thickness of the first conductive block is at least two times the thickness of the ceramic dielectric.

18. The capacitor of claim 17 wherein the thickness of the ceramic dielectric is about 10 mils or less.

19. The capacitor of claim 17 wherein the thickness of the ceramic dielectric is about 1-5 mils.

20. A surface mountable, monolithic capacitor comprising:

a center ceramic dielectric having first and second opposed surfaces;

first and second conductive composite end blocks each consisting essentially of glass and a conductive metal in an amount sufficient to render the composite conductive, the first and second conductive composite end blocks each having an internal face and a plurality of external faces,

wherein the glass at the internal face of the first conductive composite end block is co-sintered to the first opposed surface of the center ceramic dielectric so as to have essentially no boundary therebetween, and

wherein the glass at the internal face of the second conductive composite end block is co-sintered to the second opposed surface of the center ceramic dielectric so as to have essentially no boundary therebetween,

whereby the first and second conductive composite end blocks serve as first and second electrodes for the capacitor.

21. The capacitor of claim 20 wherein the conductive metal comprises about 60-98% and the glass comprises about 2-40% of the first and second conductive composite end blocks.

22. The capacitor of claim 20 wherein the conductive metal comprises about 88-98% and the glass comprises about 2-12% of the first and second conductive composite end blocks.

23. The capacitor of claim 20 further comprising a first internal metal electrode within the center ceramic dielectric and at least one first conductive metal-

filled via extending from the first internal metal electrode to the first conductive composite end block.

24. The capacitor of claim 23 further comprising a second internal metal electrode within the center ceramic dielectric and at least one second conductive metal-filled via extending from the second internal metal electrode to the second conductive composite end block.

25. The capacitor of claim 20 wherein the glass in the first and second conductive composite end blocks is distributed homogeneously throughout a matrix of the conductive metal.

26. The capacitor of claim 20 wherein the glass in the first and second conductive composite end blocks is concentrated adjacent the internal faces of the first and second conductive composite end blocks.

27. The capacitor of claim 20 wherein the first and second conductive composite end blocks each include a composite portion consisting essentially of the glass and the conductive metal positioned adjacent the respective internal faces and co-sintered to the respective first and second opposed surfaces of the center ceramic dielectric and a metal portion consisting essentially of the conductive metal positioned adjacent the respective composite portion opposite the center ceramic dielectric.

28. The capacitor of claim 20 wherein the center ceramic dielectric is free of internal metal electrodes.

29. The capacitor of claim 20 wherein the center ceramic dielectric has a thickness in a direction from the first opposed surface to the second opposed surface, and the first and second conductive composite end blocks each have a thickness in a corresponding direction, and wherein the thicknesses of the first and second conductive composite end blocks are each at least two times the thickness of the center ceramic dielectric.

30. The capacitor of claim 29 wherein the thickness of the ceramic dielectric is about 10 mils or less.

31. The capacitor of claim 29 wherein the thickness of the ceramic dielectric is about 1-5 mils.

32. The capacitor of claim 20 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 10 mils x 10 mils x 10 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-5 mils x 10 mils x 10 mils.

33. The capacitor of claim 20 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 20 mils x 20 mils x 20 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-10 mils x 20 mils x 20 mils.

34. The capacitor of claim 20 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 20 mils x 20 mils x 20 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-7 mils x 20 mils x 20 mils.

35. The capacitor of claim 20 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 30 mils x 30 mils x 30 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-15 mils x 30 mils x 30 mils.

36. The capacitor of claim 20 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 30 mils x 30 mils x 30 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-10 mils x 30 mils x 30 mils.

37. A printed circuit board comprising a metallic surface trace having a mounting surface oriented horizontally with respect to the board, and the capacitor of claim 1 mounted thereon with one of the external faces of the first conductive block bonded to the mounting surface of the metallic surface trace, wherein the bond region between the composite portion and the ceramic dielectric is oriented vertically with respect to the board.

38. A printed circuit board comprising a metallic surface trace having a mounting surface oriented horizontally with respect to the board, and the capacitor of claim 1 mounted thereon with one of the external faces of the first conductive block bonded to the mounting surface of the metallic surface trace, wherein the bond region between the composite portion and the ceramic dielectric is oriented horizontally with respect to the board.

39. A printed circuit board comprising first and second metallic surface traces, each with a mounting surface oriented horizontally with respect to the board, and the capacitor of claim 20 mounted thereon with one of the external faces of each of the first and second conductive composite end blocks bonded to the respective mounting surface of the first and second metallic surface traces and the opposed surfaces of the ceramic dielectric and the internal faces of the first and second conductive composite end blocks oriented vertically with respect to the board.

40. A printed circuit board comprising first and second metallic surface traces, each with a mounting surface oriented horizontally with respect to the board, and the capacitor of claim 20 mounted thereon with one of the external faces of the first conductive composite end block bonded directly to the mounting surface of the first metallic surface traces and the opposed surfaces of the ceramic dielectric and the internal faces of the first and second conductive composite end blocks oriented horizontally with respect to the board, and a conductive wire bonded at a first end to the second metallic surface trace and at a second end to one of the external faces of the second conductive composite end block.

41. A printed circuit board comprising:

first and second metallic surface traces, each having a generally horizontally oriented mounting surface; and

a capacitor chip comprising a vertically oriented center ceramic dielectric between first and second conductive composite end blocks, the first and second conductive composite end blocks each consisting essentially of glass and a conductive metal in an amount sufficient to render the composite conductive, and each having a plurality of external faces and an internal vertical face oriented vertically relative to the mounting surfaces of the first and second metallic surface traces, wherein the glass at the internal vertical face of each of the first and second conductive composite end blocks is co-sintered to respective opposed vertically oriented surfaces of the center ceramic dielectric so as to have essentially no boundary therebetween,

wherein the first conductive composite end block is directly mounted to the mounting surface of the first metallic surface trace and the second conductive composite end block is directly mounted to the mounting surface of the second metallic surface trace, and wherein the first and second conductive composite end blocks serve as first and second electrodes for the capacitor.

42. The printed circuit board of claim 41 wherein the glass in the first and second conductive composite end blocks is concentrated adjacent the internal faces of the first and second conductive composite end blocks.

43. The printed circuit board of claim 41 wherein the first and second conductive composite end blocks each include a composite portion consisting essentially of the glass and the conductive metal positioned adjacent the respective internal faces and co-sintered to the respective first and second opposed surfaces of the center ceramic dielectric and a metal portion consisting essentially of the conductive metal positioned adjacent the respective composite portion opposite the center ceramic dielectric.

44. The printed circuit board of claim 41 wherein the center ceramic dielectric has a thickness in a direction from the first opposed surface to the second opposed surface, and the first and second conductive composite end blocks each have a thickness in a corresponding direction, and wherein the thicknesses of the first and second conductive composite end blocks are each at least two times the thickness of the center ceramic dielectric.

45. The printed circuit board of claim 44 wherein the thickness of the ceramic dielectric is about 10 mils or less.

46. The printed circuit board of claim 44 wherein the thickness of the ceramic dielectric is about 1-5 mils.

47. The printed circuit board of claim 41 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 10 mils x 10 mils x 10 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-5 mils x 10 mils x 10 mils.

48. The c printed circuit board of claim 41 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 20 mils x 20 mils x 20 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-10 mils x 20 mils x 20 mils.

49. The printed circuit board of claim 41 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 20 mils x 20 mils x 20 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-7 mils x 20 mils x 20 mils.

50. The printed circuit board of claim 41 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 30 mils x 30 mils x 30 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-15 mils x 30 mils x 30 mils.

51. The printed circuit board of claim 41 wherein the first and second conductive composite end blocks are square blocks each having width x height x depth dimensions of about 30 mils x 30 mils x 30 mils, and wherein the center ceramic dielectric has width x height x depth dimensions of about 1-10 mils x 30 mils x 30 mils.

52. A method of making a printed circuit board comprising the steps of:

providing a capacitor chip comprising a center ceramic dielectric between first and second conductive composite end blocks, the first and second conductive composite end blocks each consisting essentially of glass and a conductive metal in an amount sufficient to render the composite conductive, and each having a plurality of external faces and an internal vertical face, wherein the glass at the internal face of each of the first and second conductive composite end blocks is co-sintered to respective opposed surfaces of the center ceramic dielectric so as to have essentially no boundary therebetween, and wherein the center ceramic dielectric has a thickness in a direction between the opposed surfaces, and the first and second conductive composite end blocks each have a thickness in a corresponding direction that is at least two times the thickness of the center ceramic dielectric;

bonding the capacitor onto a surface of a printed circuit board having first and second metallic surface traces thereon with one of the external faces of the first conductive composite end block bonded directly to the first metallic surface trace and one of the external faces of the second conductive composite end block bonded directly to the second metallic surface trace;

wherein the external faces soldered to the metallic surface traces are substantially perpendicular to the internal faces whereby the center ceramic dielectric is oriented vertically with respect to the surface of the printed circuit board.

53. A method of making an essentially monolithic capacitor comprising the steps of:

placing one or more green-state ceramic dielectric sheets of a total combined first thickness on one or more first green-state conductive composite sheets of a total combined second thickness at least twice the total combined first thickness, the one ore more composite sheets comprising glass and conductive metal in an amount sufficient to render the composite conductive;

laminating the sheets together;

cutting the laminated sheets a plurality of times in a first direction and then a plurality of times in a second direction non-parallel to the first direction to form a plurality of chips comprising a green-state ceramic dielectric adjacent a first green-state conductive composite block; and

firing the chips to sinter the ceramic in the ceramic dielectric to the glass in the first conductive composite block.

54. The method of claim 53 further comprising, prior to laminating, placing one or more second green-state conductive composite sheets of a total combined third thickness at least twice the total combined first thickness on the one or more green-state ceramic dielectric sheets, whereby after cutting, a plurality of chips are formed comprising the green-state ceramic dielectric between first and second green-state conductive composite blocks, and whereby during firing, the ceramic in the ceramic dielectric is sintered to the glass in both the first and second conductive composite blocks.

55. The method of claim 53 further comprising providing a metallization on the ceramic dielectric on a face opposing the first conductive composite block.

56. The method of claim 53 further comprising forming the green-state ceramic dielectric sheet with one or more buried electrodes therein and one or more metal filled vias extending from each buried electrode to a surface of the ceramic dielectric sheet.

57. A method of making an essentially monolithic capacitor comprising the steps of:

placing at least one first green-state conductive composite sheet on at least one first metal sheet to form a total combined first thickness, the at least one composite sheet comprising glass and conductive metal in an amount sufficient to render the composite conductive;

placing one or more green-state ceramic dielectric sheets of a total combined second thickness on the at least one first green-state conductive composite sheet, wherein the total combined first thickness is at least twice the total combined second thickness;

laminating the sheets together;

cutting the laminated sheets a plurality of times in a first direction and then a plurality of times in a second direction non-parallel to the first direction to form a plurality of chips comprising a green-state ceramic dielectric adjacent a first conductive block having a green-state composite portion and a metal portion; and

firing the chips to sinter the ceramic in the ceramic dielectric to the glass in the composite portion of the first conductive block.

58. The method of claim 57 further comprising, prior to laminating, placing at least one second green-state conductive composite sheet on the one or more green-state ceramic dielectric sheets, and placing at least one second metal sheet on the at least one second green-state conductive composite sheet to form a total combined third thickness of the at least one second green-state conductive composite sheet and the at least one second metal sheet that is at least twice the total combined second thickness, whereby after cutting, a plurality of chips are formed comprising the green-state ceramic dielectric between first and second conductive blocks each having a green-state composite portion and a metal portion, and whereby during firing, the ceramic in the ceramic dielectric is sintered to the glass in the composite portions of the both the first and second conductive blocks.

59. The method of claim 57 further comprising providing a metallization on the ceramic dielectric on a face opposing the first conductive block.

60. The method of claim 57 further comprising forming the green-state ceramic dielectric sheet with one or more buried electrodes therein and one or more metal filled vias extending from each buried electrode to a surface of the ceramic dielectric sheet.